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LEADING ARTICLES

THE OPEN OPERATIVE TREATMENT OF FRACTURES OF THE PATELLA.

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As yet, there is no uniformity of opinion, no uniformity of practice, as to what should be done, as to what is done in the treatment of fractures of the patella.

For the fractures of this sesamoid bone, the largest in the human body, many different operative methods have been devised, suggested, advocated and practised; numerous are the observations that have been collected and published, descriptive, condemnatory and commendatory of these various methods. However, by far the greater number of the methods proposed have been abandoned, have been superseded by a few less objectionable, more preferable methods. Operative and clinical experience have led to the omission, to the elimination from the operative procedure of such steps as were found to be needless, of such steps as were found to be harmful, and to the introduction to the general employment, of some of great desirability.

This diversity of methods employed by men of recognized surgical attainment suggested questions to my mind. It is of practical importance that these questions be accurately answered. These answers, we think, should be determined, should be arrived at, partly by theoretical consideration, partly by the study of the pathological anatomy present (as revealed at the operating table or at the autopsy room) in knee joints whose patella have been fractured, and largely and mainly, by the clinical observation and clinical comparison, from the anatomical and functional standpoints of the results obtained, by the employment of the various methods of treatment advocated and practised.

Among the questions calling for a definite answer are the following: 1. Is the patella essential to the functional integrity of the knee-joint?

2. Are the permanent displacements of the patella, in whole or in part, congenital or acquired, deformities significantly impairing the functions of the knee-joint?

3. Are there other traumatic lesions, simulating from the symptomatic standpoint, by the functional disturbances which they entail, fractures of the patella? What are these conditions? How are they best treated?

4. Which is the treatment of choice for fracture of the patella?

5. Is operation, at times, contraindicated? If so, when?

6. If operation is not always indicated, when is it indicated?

7. How should the treatment of old fractures differ from that of recent fractures, or is the same treatment applicable to both? If not, why not?

8. Which of the principal various open operative procedures that are now in vogue for the treatment of fractures of the patella, is the most universally applicable, the most satisfactory from the standpoint of early and of late results; transverse or longitudinal osseous suturing, looping of the patella (cerclage Berger), hemi-cerclage (Quenu), or suturing of the peri and parapatellar fibrous tissues (suture des ailerons, Vallas, retinaculae patellae, B.N.A.), (reserve extensor apparatus, Mikulicz)?

Questions of operative technique, concerning equally all the different open operative methods, for fractures of the

patella, must also be decided. Among them are the following:

a. Should one, if he be an advocate of the open operative treatment, operate on the day or on the morrow of the infliction of the injury, or should he wait till the soft tissues have recovered from the immediate effects of the traumatism?

b. What should be the nature of the anesthetic employed? Local, lumbar, or general anesthesia?

c. Should the operative field be rendered bloodless by the employment of an Esmarch bandage?

d. By what type of incision is the operator best enabled to perform the repair work which he deems appropriate and necessary?

e. Is it advisable in operations for fractured patellae to irrigate the articulation? If so, with what fluid, an antiseptic solution, irritating or non-irritating, or merely a cleansing agent, such as normal salt solution? Or is the mere sponging out of the extravasated liquid and clotted blood, from the synovial cavity productive of the most satisfactory results?

f. Should non-absorbable, or absorbable, suture material be used? Are there any valid reasons for discarding non-absorbable suture material?

g. Shall the completely detached bony fragments be removed?

h. Shall the articulation be drained?

i. Shall the peri-articular tissues be drained?

j. What should be the duration and the nature of the post-operatve treatment?

"Is the patella essential to the functional integrity of the knee-joint" can be answered as follows:

A careful study of the reported cases, amply justifies the statement that congenial absence, unilateral or bilateral, of the patella, is always associated with some impairment of the functional integrity of the anatomically defective knee-joint or joints (I a, b, c, d). This impairment in some cases is very slight; in other cases, it is considerable. In some of the reported cases we find mentioned as contributory factors to the disability, one or more of the following conditions: Faulty insertion of the patellar tendon, subluxation of the knee, hyperextension of the leg on the thigh, other associated congenital deformities or anomalies, etc.

ACQUIRED ABSENCE OF THE PATELLA.

The patella has been removed for inflammatory affections, osteomyelitis, chronic (2 a,b, c) or tubercular in nature (3 a,b, c,d); for fractures, transverse (4 a,b), or comminuted (5 a,b,c) in type; for primary malignant disease (6). A cursory study of the collected cases shows, among other things:

a. That the removal of the patella can be successfully performed under spinal or under general anesthesia.

b. That though the patella seem under certain conditions to be unessential for locomotion; nevertheless, its removal is invariably followed by impairment of power, by some functional loss. I have personally examined some of these cases, and though, as in Prof. J. B. Murphy's (3c) and in Dr. Cassius C. Rogers (4b) cases, the patients have very serviceable knee-joints, it cannot be gainsaid that as a general rule, knee-joints without patellae are impaired joints. To preserve the continuity of the extensor apparatus of the leg, to conserve, after removal of the patella, the stability of the knee-joint, the gap left by its extirpation must be obliterated, by suturing the tendon of the quadriceps to the ligamentum patellae, and by such operative measures, plastic or other, as may be indicated in the individual case. The extirpation of the patella is always a sacrifice. Its loss deprives the knee-joint of the protective influence which this bone affords to the articulation, this sesamoid bone being an important factor in the distribution over a considerable area of any force applied to the front of the knee. The patella provides considerable leverage for the quadriceps muscle and its removal is followed by a weakening and an impairment of the action of the quadriceps extensor tendon upon the leg. All sesamoid bones are mechanical accessories of the tendons in which they are partially or completely embedded. by this sesamoid bone, the tendon of the quadriceps is kept spread out and prevented from being gathered up in a round cord. The patella forms a much more suitable pulley for movements round the condyles than the tendon itself, and in addtion, serves a minor purpose in keeping the upper end of the patellar ligament in a plane well in front of the axis of flexion and extension. In uncomplicated transverse fractures of the knee-cap, the extirpation of the patella as a form of treatment is to be condemned. In comminuted fractures, it deserves consideration only as a measure of last resort. In inflammatory and neoplastic disease of the bone, extirpation is a valuable resource. In primary malignant neoplastic disease, no one questions the wisdom of its removal.

Are permanent displacements of the pa-

tella, in whole or in part, congenital or acquired, deformities significantly impairing the functions of the knee-joint.

The patella being a sesamoid bone, cannot undergo any upward displacement unless there be an associated relaxation or rupture of the ligamentum patellae, cannot be dislocated downward without either an associated relaxation or an associated rupture of the quadriceps extensor tendon.

Our first statement was, that absence of the patella, congenital or acquired, is always associated with some impairment of the functional integrity of the knee-joint. This functional impairment may be slight, may be markedly disabling. Our second statement is, that any dislocation of the patella, be it intermittent or permanent, be it complete or incomplete, be it congenital or acquired, is also always associated with some impairment, slight or severe, of the functional integrity of the knee-joint. The fact that operations have been devised and performed for the remedying of congenital dislocations of the patella, is another proof that anomalous location of the patella entails disability (7a,b,c,d,e).

Are there other traumatic lesions, simulating from the symptomatic standpoint, by the functional disturbances which they entail, fractures of the patella? What are these conditions? How are they best treated?

All permanent upward or downward displacements of the patella as a whole, if dependent upon rupture of the quadriceps extensor femoris tendon, or of the ligamentum patellae, will cause symptoms somewhat analogous to those which are caused by complete transverse, oblique, stellate or comminuted fractures of the patella. Violence of the same nature can determine a solution of continuity of either the tendon, the patella or the ligament. The force that indirectly produces the solution of continuity is obviously exerted equally on the quadriceps tendon, on the ligamentum patellae, on the tuberosity of the tibia and on the patella; but fracture of the patella is by far the most common result of such indirect violence.

Traumatic or pathological, open or subcutaneous ruptures of quadriceps extensor femoris tendon or of the ligamentum patellae, may, like fractures of the patella, be simple or complicated, be complete or incomplete, be unilateral or bilateral. They may be associated with, precede, or follow a fracture of the patellae.

The following table shows the symptomatic resemblance existing between these three conditions:

Complete Rupture of Quadriceps Extensor Femoris Tendon.	Complete rupture of the ligamentum patella.	Complete transverse fracture of the patella.
1. May be bilateral.	do.	do.
2. More common in males	do.	do.
3. May be due to direct, to indirect violence. to muscular action, or to a combination of two or of all of these different forms of violence. It is frequently stated that the disabling lesion occurred during an effort on the part of the individual to avoid a fall (9). Quenu says that in the great majority of cases, rupture occurs during a contraction of the quadriceps extensor initiated to avoid flexion of leg on thigh.....	do.	do.
4. Inability to extend leg on thigh. Patient is unable to elevate heel from surface of bed.	do.	do.
5. Distinct sulcus can be felt between the margins of proximal and distal portions of the divided tendon.	Distinct sulcus can be felt between the margins of the proximal and distal portions of divided ligament.	Distinct sulcus can be felt between fragments of the fractured patella.
6. Flexion increases, extension lessens width of sulcus	do.	do.
7. Joint involvement frequent. "Out of 21 cases treated operatively in 10 the joint capsule was found opened" (Walker 10). If the site of rupture be at or near the patellar attachment of the tendon, the knee-joint is usually opened, owing to the anatomical relations of the latter.	More frequent (11). "In 20 cases of ruptured ligament patellae treated operatively, Walker (10) states that the joint capsule was involved in 12 cases.	Almost constant.
8. Open operation gives by far the best results. Out of 21 cases treated by the open operative previous to 1896, 19 made a complete recovery (Walker 10). Since then the results of operative treatment have improved...	In 23 cases treated non-operatively, the recovery was complete in only several (Binet). Out of 20 cases treated by the open method previous to 1896, complete recovery followed in 16 (10).	It is the treatment of election.

The quadriceps extensor femoris muscle, the patella and the ligamentum patellae are the main structures by which extension of the leg on the thigh is effected. The integrity of each of the main constituent parts of this extensor apparatus is indispensable for the proper performance of the functions of the knee-joint. The restoration of the continuity of a completely fractured patellae is just as essential for anatomical and functional recovery of the affected extremity as is that of a completely divided quadriceps extensor femoris tendon or that of a completely torn ligamentum patellae. The careful approximation of the divided ends of the quadriceps extensor femoris tendon, the exact co-operation of the separated ends of the torn ligamentum patella can be done effectively only by the aid of sight, that is, through an open operation (8a,b,c,d,e.). The same applies to the fractured patella, the exact apposition of the fractured surfaces of whose fragments is frequently prevented by obstacles

removable, only by an open operation. The ideal function only exists when each and all of the afore-mentioned elements are anatomically and functionally absolutely normal. The study of the subject conclusively demonstrates that the absence of any single one of these elements (patella, ligamentum patellae or quadriceps extensor femoris tendon) or the presence of a pathological state of any single one of them manifests itself by impairment of function. It leads to the conclusion that perfect function presupposes and demands anatomical integrity.

TREATMENT.

In fractures of the patella, the following indications have to be met:—

1. The fracture must be reduced.
2. The bony fragments must be maintained in intimate apposition until organic union has been effected.
3. The continuity of the divided soft tissues must be re-established.
4. The functional integrity of the knee-joint must be resorted.

The value of any form of treatment is dependent upon its ability to meet the above indications. All forms of treament can be classified into one or the other of two main classes: The non-operative and the operative. The latter admits of further subdivision into the subcutaneous and into the open methods.

It is evident, that in each individual case, the adoption or rejection of any form of treatment is to be determined largely by the nature, the type of fracture at hand. Each method has advantages and disadvantages; indications and limitations.

The numerous non-operative methods of treatment that have been employed; the large number of percutaneous and subcutaneous operations for approximation of the fragments, that have been proposed, lauded, tried and then abandoned; the comparatively great number of patients, who, having been subjected to non-operative treatment, of themselves seek operative treatment in order to lessen or entirely overcome their disability, all these are proofs that all the non-operative, and the subcutaneous operative methods, as well, have deficiencies which debar them from ever being elective methods of treatment.

Occasional cases are to be found in the literature of the subject in which, though the operator succeeded in restoring to the patella its normal anatomical contour, functional integrity of the knee-joint was not secured. Our explanation for these cases is that some essential step in the operation has either been completely overlooked or unskillfully performed, or that the post-operative treatment has been injudicious. The extravasated blood may not have been removed from the synovial cavity; the lacerations of the soft tissue may not have been repaired, etc.

A distinction must be made between the shortcomings of the operator and the shortcomings of an operative procedure as such.

A few, very few cases, such as the following, can be found in the literature:

Sonnenberg (11) showed two patients, who, despite a separation of from 3 to 4 inches between the fragments of their fractured patellae and noticeable atrophy of the quadriceps extensor femoris, had fairly good function. In one of these the bone was in three fragments owing to a twice fractured patella. An explanation of these exceptional cases is to be found in the fact that the reserve extensor apparatus of the leg either was not injured or if injured that its integrity was restored and thereby the loss of continuity of the patella is fairly well compensated. Though in isolated cases good functional results may follow non-operative treatment of fractures of the patella, as a rule, its employment is followed by very unsatisfactory results. Facts confirm what logic had led us to expect. Anatomical and functional integrity go hand in hand. In the treatment of fractures of the patella, we have come to discard all the subcutaneous and percutaneous operations. In scientific conception and in the practical results obtained by their employment, the inferiority of the various subcutaneous methods to the various open operations is manifest. We acknowledge that under exceptional circumstances, the operator may feel compelled to resort to them. The best known are Ceci's, Kocher's, Barker's, and Butcher's operation. Ceci's operation consists in subcutaneously drilling the fragment and inserting the approximating wire in a figure of eight pattern; Butcher's, Barker's or Kocher's methods consist of passing approximating metallic or non-metallic ligatures around or over all the fragments.

Why do we advise the abandonment of the various subcutaneous and percutaneous operations? Because:

1. They do not enable the surgeon to accurately coapt the fractured fragments. After an arthrotomy, either by bone suturing, by circumferential looping or ligaturing, or by careful sewing of the torn soft tissues, the fragments can be closely apposed and held immovably together. This

intimate apposition of the fractured surfaces lessens the liability to an excess, either in length or in width, of callus formation. Any change in the contour of the patella is liable to interfere with the normal adaptation of its articular surface to the femoral articular surface.

2. They do not enable the operator to freshen the fractured surfaces. In the repair of old fractures, the resection of the interfragmentary fibrous bond of union, the freshening of the fractured surfaces are among the essential steps of the operation.

3. They do insure against union of the bony fragments in a faulty position. Impaired function results from union in a faulty position. The open operation enables the surgeon to overcome any tilting of fragments, as well as any tendency to union in faulty position.

4. The subcutaneous methods make no provision for the toilet of the synovial cavity. The open operation allows of the early and complete removal of all articular effusions, of all extravasated blood, intra or extra-articular, liquid or clotted, of all completely detached bone fragments.

5. The tears in the capsule, the lacerations in the aponeurotic expansions of the Vasti, demand repair. Only by means of an open operation can they be repaired. The extensor apparatus of the leg must be considered as one organ. Structural impairment of any of its constituent parts entails a corresponding impairment of function. The insertion of the Vastus externus and the Vastus internus into the capsule of the knee-joint and the lateral prolongations of their insertions down upon the head of the tibia and fibula are of assistance in the extension of the leg on the thigh. Solutions of continuity in these tissues must be repaired.

6. None of the subcutaneous operations allow of the removal of the fibro-periosteal shreds which so frequently overlap the fractured surfaces and which in some cases have been found to adhere so tightly to bony projections that for their liberation it was necessary to use forceps and curette. These fibro-periosteal shreds are an obstacle to osseous union; they can be removed by an open operation.

7. The subcutaneous and percutaneous operations create openings which are inadequate for the escape of intra-articular and extra-articular extravasates and exudates, but which are ample for the introduction of infection.

Before proceeding, let us determine the dangers, their nature and their gravity, to which patients are exposed by the employment of the open operative treatment.

The probability of ankylosis, joint suppuration or pyemia following an aseptic arthrotomy, for practical purposes, can almost be disregarded. In none of Mullin's cases (12), was there a rise of temperature worth mentioning. Stimson (13) between the years 1892-1906 performed the open operation for fractured patellae over 200 times. During this entire period his only mishap was a slight suppuration which caused no subsequent difficulty. We concede that the general dangers inherent to other major operative procedures are also present in those cases. These dangers, anesthesia, shock and suppuration, are common to all operations. Shock can be minimized by rapid operating. The time consumed in the performance of any operation should be the shortest consistent with the careful and complete execution of the different steps of the operation. We will not at this time discuss the other two dangers.

Thiem (14) examined the official records for the years from 1895-1903, inclusive, of the German Workingmen's Indemnity Insurance Union. This is an official record and among the reporters are advocates and opponents of the open operative treatment. During this period, indemnity was paid for 283 patellar fractures; 223 of these were treated non-operatively; 6 deaths occurred; 60 cases were treated operatively, 2 deaths occurred. One of these deaths was from delirium tremens complicated by pneumonia; the other death was due to pyemia, consecutive to a suppurative arthritis.

In the 1100 consecutive cases analyzed by us, we note the following accidents. In 1898, in one case (15) following operation on an old fracture, some inflammation of the peri-articular tissues developed. It caused no permanent disturbance. In the same year, two cases of superficial suppuration and one case of suppurative arthritis are reported. In the latter case, ankylosis resulted. In 1898 (16), 5 cases of ankylosis followed operative treatment. In 1902 (17), Baerlocher reports having had, after open operative treatment, one case of ankylosis and two deaths. One of these deaths was due to delirium tremens; the other one was due to pneumonia.

This gives us in 10 years, 16 cases of ankylosis, 6 of which occurred either in or previous to the year 1898. Of the remaining 10 cases, 4 occurred in the hands of an operator, who, judging from his reports, has been unusually unfortunate with this operation. The 5 others occurred in the practice of enthusiastic advocates of the

open operative treatment (Baerlocher, Championniere, Trendelenburg, Ranzi, Rigby). In one case (21), owing to knee-suppuration and joint disorganization, a leg amputation had to be performed. During the period covered by the years 1898 to 1908 inclusive, we have, occurring after this operation 6 deaths. Three of these, in our opinion, cannot be attributed to the operation (delirium tremens, pneumonia (17), apoplexy (18). One death was determined by pulmonary embolism (19). We must acknowledge two deaths (20a, b) from infection.

We believe we are fully justified in stating that the dangers of the open operation, if it be performed with due precaution by careful and skillful hands, are practically nil. There is always plenty of time to reach hands well able to perform the operation.

What are some of the advantages of the open operative method?

1. Refracture of the patella is more common after massage and other forms of non-operative treatment than after the open operative treatment. Refracture is more frequent in the patella than in any other bone, Lauper (22). By more closely restoring the bone to perfection, the open operative treatment lessens to a considerable degree the tendency to refracture.

2. In any fracture the union between the fractured fragments which is considered the most desirable, is osseous union. Modern surgeons do not expect to obtain osseous union in fractures of the patella which are treated non-operatively. Its occurrence under such conditions, though possible, is so rare that it is considered a pathological curioisty. One of the main justifications of the open operative treatment is the frequency with which osseous union follows its employment.

It being a demonstrated fact that osseous union can be obtained, it behooves us to employ that method of treatment which most frequently secures it.

It cannot be contested that the solidity of the patella contributes, in a great measure, to the stability of the knee-joint. Fibrous union of the fractured bone imparts to the articulation a weakness, an uncertainty, an instability, as a result of which patients with fibrously united patella, frequently fall. This lack of stability, this impairment of control prediposes to refracture of the fibrously united patella. It is exceptional for fibrous union to be associated with absolute functional recovery. A fibrous union has a tendency to elongate under use.

3. The open operations enable us to obtain a more rapid, a more complete recovery. Koerte, considers that the climbing of stairs after fracture of the patella, is a criterion of functional recovery. In 25 cases of fractured patellae, treated by the open method, Koerte (14) later examined 23. These 23 had all become able to climb stairs within four and one-half months subsequent to the operation. The more active the patient is, the more his occupation involves work on different levels, the more is operative treatment indicated.

4. The open operation enables the operator to mitigate all and to remove most of the conditions that tend to cause imperfect union and its consequence impaired functional integrity. Let us enumerate and briefly discuss the most important of these unfavorable conditions.

1. Separation of the fragments.

2. Tilting of the fragments.

Either or both fragments, often, are or may be, everted or inverted. In the presence of tilting, the fragments can never be maintained with the fractured surfaces exactly towards each other either by bandages or by retentive appliances, or by any subcutaneus operative method.

3. Rupture of the tendinous expansions of the vasti and of the lateral portions of the capsule of the joint.

4. Prolapse of the prepatellar tissues into the breach caused by the separation of the fractured fragments.

5. Atrophy of the quadriceps femoris due to disuse, arthritis, marked contusions of the muscle, extravasated blood from the joint through the rent in the upper part of the capsule, etc.

6. Arthritis of the knee-joint.

7. Adhesions of the patella.

The upper fragment has been found adherent to the femoral condyles (18, 23).

8. Union of the fragments in bad position, mechanically interfering with proper function of joint.

The open operation enables the operator to void inflammatory exudates to make the toilet of the synovial cavity.

If a loose spicule of bone be found between the fragments, its removal is easily effected (24). The open operative method allows us to completely overcome the tilting of the fragments and to coat them with a nicely unattainable by any other method.

If, shortly after a fracture of the patella, the knee-joint is opened, it will be found that the articulation contains blood. The quantity of the extravasated blood is not the same in all cases. In some cases, it is small; in others, considerable filling the

joint to distention. The blood may be liquid, clotted or semi-organized. Not infrequently, it originates intra-articular adhesions or loose foreign joint bodies. It is easy to conceive how a large intra-articular adhesions or loose foreign joint bodies. It is easy to conceive how a large intra-articular liquid collection, can, in transverse or oblique fractures, rotate the upper or lower fragment, or both, about a transverse axis. Baerlocher (17) in reporting his cases, states: "In every case there was hemorrhage into the joint."

RUPTURE OF THE TENDINOUS EXPANSION OF THE VASTI AND OF THE LATERAL PORTIONS OF THE CAPSULE OF THE JOINT.

In fractures of the patella, as in other fractures, in addition to the lesion of the bone, we have existing injuries of the contiguous soft tissues.

When one recalls the intimate relations with the patella of the fascia, muscles and ligaments which surround it, no stretch of the imagination can possibly conceive a fracture of this bone without some associated damage to the surrounding structures. The more extensive that damage the greater the separation of the bone fragments, the less the liability to spontaneous functional recovery. From the diagnostic standpoint, it is important to determine, if after falling, the patient got up, or if he made any attempt at walking. Attempts on the part of the patient to arise, determine further lacerations of the parapatellar ligaments, and consequently further separation of the fragments. Vallas holds that a bad result following a transverse fracture of the patella is due not so much to non-union and wide separation of the two fragments as to unrepaired lacerations of the anterior and lateral portions of the capsule of the knee-joint. Vallas advocates strongly the suturing of all rents in the fibrous investment of the knee. Mikulicz, Baerlocher, Lejars and Stimson emphasize also the importance of restoring the continuity of the torn reserve extensor apparatus.

Upon the proper repair, upon the proper reunion of these soft tissues is dependent, in an important measure, the functional integrity of the knee-joint. E. W. Andrews states that the patella union is only an incident in the ligamentous and tendinous repair by suture. So important is the approximation of these torn tissues, so essential, is the restoration of the continuity of the aponeurotic fibres of the vasti, of the rectus femoris and of the deep fascia of the leg and thigh, that many operators in the treatment of factured patellae limit all their suturing to the torn soft tissues.

PROLAPSE OF THE PREPATELLAR TISSUES INTO THE BREACH.

This prolapse of the prepatellar fibrous tissue between the fragment of the fractured bone, is one of the important obstacles to non-union. The prevention by these intervening soft tissues of the exact apposition of the fragments is one of the most valid reasons for resorting to the open operation. When present, these interposed soft tissues constitute an obstacle to osseous union, removable only, by the open operation.

This fibro-periosteal curtain may overlap the fractured surface of either fragment. In some cases, both fractured surfaces are either partly or completely covered by this prolapsing prepatellar tissue. These prolapsed tissues may be easily removable, may be hooked to the underlying bone. When hooked to the fractured surfaces, their removal is, at times, attended with some difficulty. In many fractures of the patella, be they tear or blow fractures, or due to both factors, the prepatellar bursa is contused. Blood and portions of the prepatellar bursa can enter into the formation of the prolapsed prepatellar curtain, being superimposed upon the aponeurotic tissues.

By the aid of the open operation, all interfragmentary soft tissues are easily removable. Bony union presupposes an exact apposition of the osseous surfaces. Blood interposed between the fragments, we do not consider as a foreign body, it being well known that between fractured surfaces, the presence of blood is constant. Intervening tissues of other description act as foreign bodies and are productive either of fibrous union or of non-union. We concede that massage relieves pain, promotes the circulation and aids in the removal of exudates, but can it accomplish anything towards the removal of the soft tissues that have prolapsed in the breach between the fragments? The attempt to remove the inter-fragmentary soft tissues by rubbing the fractured surfaces one upon the other is illusory. Interposed soft tissues can be removed only by means of the open operation.

ATROPHY OF THE QUADRICEPS FEMORIS MUSCLE.

This atrophy is due partly to disuse, partly to extravasation of blood in the substance of the muscle, partly to associated injury to the muscle and to its contained nerve filaments. By the aid of the open operation, all blood extravasation can be removed, fascial tears can be sutured.

The patients regain the use of their limbs in a comparatively short period of time; the period of immobilization is markedly shortened. Active use prevents and overcomes atrophy attendant upon disuse. It is said that "an ounce of voluntary exercise is worth a ton of massage in the treatment of muscle atrophy" (25). Atrophy of the quadriceps extensor femoris is recorded in many cases of old fracture (26a, b, c, d, etc.). The early removal of all extravasated blood, liquid or clotted, from the articular cavity and from the peri-articular tissues, limits the liability to the formation of adhesions, intra and extra-articular in nature.

By the employment of the open operative treatment, all the above mentioned obstacles to restoration of functional integrity can be more rapidly, more effectually overcome than by resorting to non-operative methods of treatment, separate or combined.

The open method makes possible the removal from the joint cavity of detached bony fragments; it enables the operator to absolutely prevent the union of the fragments in a faulty position, that is, in a position mechanically interfering with the proper function of the joint; the tendency to adhesion of the upper patellar fragment to the femoral condyles is lessened. Increase in the dimensions of the patella following the open operative treatment is a rarity. Any increase in the dimensions of the patella is very liable to interfere with the adaptability of the patellar and femoral articular surfaces.

In fractures of the patella, as in other fractures, the closer the apposition of the fragments, the greater the probability of osseous union, of osseous repair, and consequently, the more probable the restoration of functional and anatomical integrity. We know that the patella is a bone of feeble regenerative power, having only one periosteal surface, nevertheless, if the conditions requisite in other bones to obtain osseous union are secured in fractures of this bone, the same satisfactory results will be obtained.

Is operation at times contraindicated? If so, when?

Under what conditions is the open operative treatment of doubtful propriety or not indicated?

In formulating indications and contraindications for the open operative treatment of fractures of the patella, we give only slight consideration to age, sex and occupation. Individuals of either sex, at all periods of life and all walks of society, need a good patella. However, in this, as in all other operations, the state of the tissues and of the viscera must not be ignored. Such anatomical and physiological deterioration of the tissues may be present, as to compel us to regretfully substitute inferior therapeutic measures to operation of election. The facts can be stated to the patient and he can select between functional integrity and functional disability. Thiem (14) gives only two conditions as contraindicating operations:

1. Absence of separation of the fragments. (No diastasis.)
2. No loss of extension.

We do not advise the open operation:

1. In fractures of the patella that occur in a diabetic patient. The tissues of diabetics offer very little resistance to infection. They are tissues of impaired regenerative power. Nevertheless, an absolutely bad prognosis need not be given in these cases.

2. In fractures of the patella, occurring in patients having advanced tubercular disease.

3. In fractures of the patella, occurring in patients suffering from well developed cardiac, renal or hepatic disease.

4. In closed longitudinal fractures, with no displacement or with but slight lateral displacement.

In fractures of this type, recovery almost invariably follows the combined use of such measures as massages, immobilization, full extension of leg on thigh, coaptation of the fragments by retentive apparatus. "Osseous union is constantly obtained in longitudinal fractures of the patella" (Macewen, 27). This statement of Macewen admits of very few exceptions. Meyer (28) used non-operative treatment in all his cases of longitudinal fracture (the diagnosis in each case had been verified by X-rays). He obtained excellent functional recoveries in all of them.

5. Fractures of the patella in which the separation of the patellar fragments is so slight as to be barely detectable, do not call for the open operative treatment. The same applies to fractures in which the injuries to the accessory patellar ligaments are unimportant.

6. Do not operate on patients who prefer to pass their lives partly disabled rather than to run the minimal dangers of an operation.

If an operation is not always indicated, when is it indicated?

The popularity of the open methods is increasing. In careful and skillful hands the dangers formerly incident to their employment can now be said to be non-existent. Kocher himself has become an

earnest advocate of the open operative treatment. In von Bergmann's clinic it is regarded since 1893 as the routine treatment for transverse fractures of the patella.

With increasing familiarity with the successive steps of the operation and a better appreciation of a judiciously carried out after treatment, the results attending its employment are becoming more and more satisfactory.

For this very important addition to our surgical resources, we are chiefly indebted to Lord Lister (29). Lucas-Championniere, one of the pioneers and also one of the most enthusiastic advocates of the open operative treatment for fractures of the patella, states that the first antiseptic operation of patellar suturing was performed by Cameron of Glasgow in 1877. Lister reported his first case in 1877. In 1883, he reported six more cases and then showed clearly that this new method of treatment was followed by perfect recovery, while previous to that time the condition had been looked upon as being, of necessity, followed by lameness. The adoption of this form of treatment, among German-speaking surgeons, is largely due to the efforts of Hackenbruch, Trendelenburg, and Koenig. Trendelenburg performed the first open operation in Germany in 1878. Among the French-speaking surgeons, the following are some of the ardent and most prominent supporters of the open operative treatment: Chaput, Berger, Lejars (Paris), Mayer, Lambotte (Brussels), Vallas (Lyons).

It was Berger (Paris) who introduced cerclage.

Our analysis shows the following results:

Miscellaneous methods 33 cases; good results 32 cases; deaths, 1 from apoplexy.

Circumferential looping, 28 cases; good results, 28 cases. Apposition of the bony fragments and suturing of the soft tissues, 240 cases; good results, 230 cases; fair results, 3 cases. In one case (30) through the fragments are 8½ cm. apart, patient walks with but little difficulty.

Bone suturing, 809 cases; good results, 730; not definitely stated, 50; moderately good, 20; bad results, 10. One of the patients had syphilis; one had diabetes mellitus; ankylosis, 10; deaths, 5; 1 infection (20a). Patient at time of accident was in bad general condition; 1 delirium tremens; 1 pneumonia; (17); 1 pulmonary embolism (19); infection incident (20) to the operation.

It is our belief that, after ample reparation of the patient and of the operative field, the open operative treatment is positively indicated; 1. In all fresh fractures of the patella in the absence of contraindications:

a. If the surroundings are favorable: (1) An aseptic operating room. (2) Skilled surgeon, and assistants having "an aspetic conscience." (3) Dependable suture material, rubber gloves, etc. b. If the patient is in the best possible condition. c. If the fracture be of such a nature that a disabling defect is to be expected if one resorts to non-operative treatment. d. When the bony fragments cannot be returned exactly by manipulation to their normal position and retained therein by retentive apparatus.

2. In all compound fractures.

3. In all cases associated with considerable intra-articular effusion. The separation and tilting of the fragments is partly produced and partly maintained by the intra-articular effusion, be the latter hemorrhagic or inflammatory in nature.

4. In all cases associated with marked laceration of the peri-articular tissues (ailerons, reserves extensor apparatus). After fractures of the patella a great distention of the joint capsule is suggestive of noticeable peri-articular lacerations.

5. In all cases in which the inter-fragmentary space or diastasis has at any time exceeded 3 cm. This extent of separation cannot occur without laceration of the accessory patellar ligaments, without rupture of the overlying fibro-periosteal tissues. Chaput (31), as a result of experiments on dissecting-room subjects came to the conclusion that the interposition between the fragments of the prepatellar fibro-periosteal tissue does not occur if the diastasis fails to reach 3 cm.

6. In such fractures as are very liable to cause serious functional joint impairment; among such may be cited cases in which bony fragments have escaped into the articular cavity (32a, b). Loose pieces of bone were removed from the joint. Cases in which lower or upper fragment or both are completely inverted, or other such anomalous cases (33a, c).

7. In all fractures of the patella occurring in individuals upon whom at one time or other a leg or thigh amputation has been performed. To such individuals complete integrity of function in the remaining limb is of the highest importance.

8. In all fractures of the patella occurring in individuals having some permanent functional impairment of the opposite knee, as for instance, in a case reported by Meyer (33b). In early life, this patient's left knee had been resected. At the age of 35, she

fractured her right patella. It was circumferentially looped by the open method. The coaptation was perfect. Result "very satisfactory."

9. In all individuals, who, having sustained a partial amputation of the leg, can for flexion and extension of an artificial limb derive benefit from the preservation of the integrity of the extensor apparatus of the leg. In a case reported by Charters (34), the lower third of the leg had been removed. Two months later, while walking on crutches, patient fell and fractured the patella of the same limb. It was wired. Complete restoration of the knee-joint movements resulted.

10. In all bilateral fractures of the patella, be they of simultaneous or successive occurrence. In bilateral patellar fractures, it is reasonable to assume some risk in an attempt to transform an almost certainly dependent individual into a self-supporting one.

11. In all refractures, in the absence of contrandications.

12. In old fractures of the patella associated with marked impairment of function, if the functional loss be dependent, wholly or partly upon one or more of the following factors:

a. Long fibrous union.

b. Union in a faulty position, in a position that mechanically interferes with the proper function of the joint.

c. Absolute non-union.

d. Ankylosis of the upper patellar fragment to the femur (18, 23). In the case reported by Erdmann (23), the quadriceps had contracted to such a degree that without operation, the fragments could not have been brought into apposition.

e. Extensive non-repaired lacerations of the aponeurotic capsular and other fibrous tissues. These lacerations hinder restoration of function, increase the fragmentary diastasis. The patella is only a part of the extensor apparatus of the leg; an important part, we admit, but not the sole part.

f. In all cases in which non-operative treatment has been followed by unsatisfactory results. In operating on old fractures of the patella it is imperative previous to the apposition of the fragments, that the fractured surfaces either be freshened or that a thin slice of bone be sawn off from each of the surfaces.

In old, as well as in all other fractures of the patella, we must in addition to repairing the tears in the soft tissues, endeavor to obtain osseous union of the fractured bone. This desideratum can be effected only by securing an exact, an accurate apposition of the freshened fractured surfaces. Consequent to the fracture and to the disability which it entails, there develops a retraction and an atrophy of the quadriceps extensor femoris. This muscular contraction, this muscular atrophy, is the most important cause of the great difficulty, a difficulty at times almost insurmountable, which we encounter in our endeavors to approximate, to appose, to reunite the bony fragments. As easy as is the primary suture of a fractured patella, just as difficult can be the suture of an old fracture of the patella. It is convenient from the operative standpoint to classify old fractures of the patella into:

A. Those in which the fragments can be approximated with but little difficulty.

B. Those in which owing to the co-existing atrophy and unusual retraction of the quadriceps extensor femoris muscle, the approximation or rather the exact apposition of the fragments is a difficult feat to accomplish.

In cases in which the fragments can be approximated with but little difficulty, the operation will differ from that preformed in recent fractures only by requiring two additional steps:

1st. The resection of the interfragmentary fibrous callus.

2d. The freshening of the fractured surfaces. It is essential that the interfragmentary gap be overcome. To approximate the fractured surfaces pre-operative massage, position and traction, at times suffice. Z-shaped incisions for lengthening of the quadriceps may have to be performed. If these measures fail to secure the relaxation, the lengthening of the quadriceps necessary to obliterate the interfragmentary gap, a plastic operation is indicated.

(To be continued.)

The sick cannot judge the world. When Cæsar was sick he cried for some drink "as a sick girl." When Cæsar was well he ruled the world. "When the devil was sick, the devil a monk would be; when the devil was well, the devil a monk was he." Sickness makes death easy.—Byron Robinson.

Maternal Impressions.—The mother who achieves does not often endow her children with the elements of success—she uses these in her own business. But the mother who is hungry to know, to do, to become, is apt to endow her sons with unfilled desires, and they fight and succeed on the ruins of her failure.—The Fra.

Portraits of Officers and Ex-Presidents

DR. HUGH T. PATRICK
President 1904

DR. HORACE GRANT
President 1906

DR. S. C. STANTON
Treasurer

DR. THOS. HUNT STUCKY
President 1897

THE MEDICAL FORTNIGHTLY

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EDITORIAL

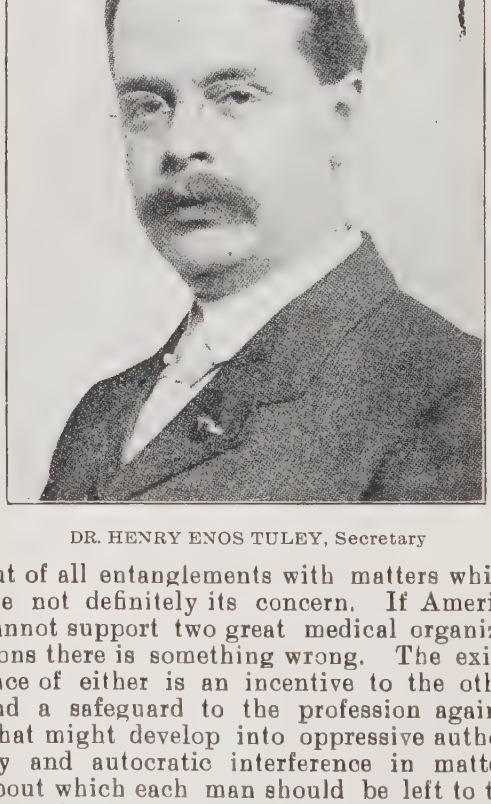
The Mississippi Valley Medical Association.

THERE can be but few of our readers who need any introduction to the Mississippi Valley Medical Association, but we fear that there may be many who will not avail themselves of the benefit of the thirty-fifth meeting which is to be held in this city on the 12, 13 and 14 of this month. This body, though nominally thirty-five years old, is in reality somewhat oider if we allow for the record of the old Tri-State Society of Indiana, Illinois and Kentucky, from which it originated. During the earlier days of the body it was characterized by a high degree of convivality and good fellowship, these qualities have been somewhat sobered by the process of time, and the organization now stands for strenuous scientific work with a very proper amount of fraternalism, in no other medical body is so much friendliness evident.

The local committees have arranged for a large attendance at this meeting, and ample entertainment is offered to supplement the scientific work. On the suggestion of the officers of the association some features of the entertainment were abandoned, as it was thought that there should be only so much as can be enjoyed with no disadvantage to the scientific programs. The Southern has given practically all of its second or parlor floor for our use, and this provides us with offices, two meeting halls and ample exhibit space all under one roof and on one floor; never has a more advantageous situation or greater convenience in this respect been had.

The preliminary program was published in our last number, it speaks for itself, it has been most carefully arranged and presents no weak spots. Especially interesting features will be a discussion of pellagra, of hook worm disease, and the symposium of exophthalmic goitre.

Unusual interest centers in this meeting because of the conflicting reports which are abroad relative to the future of the association; some say that it is to lose its identity and become a branch of another body, others claim that it is to be strengthened and made an active competitor for scientific pre-eminence of all other medical bodies. When there shall cease to be competition it will be a sorry day for progress. It is no safer to establish an absolute unification of medical organization than it ts to do the same with industrial lines, and the general public sees the evil of too much consolidation elsewhere. We can wish the Mississippi Valley Medical Association no better thing than continued independence, greater growth and a keeping



DR. HENRY ENOS TULEY, Secretary

out of all entanglements with matters which are not definitely its concern. If America cannot support two great medical organizations there is something wrong. The existence of either is an incentive to the other and a safeguard to the profession against what might develop into oppressive authority and autocratic interference in matters about which each man should be left to the use of his own best judgment. Rather than consolidation we would be in favor of this association again changing its name, if necessary, and becoming, as it could with entire propriety, a body of national scope.

The meeting is held under the following officers:

President, J. A. Witherspoon, Nashville.
First Vice-Pres., Louis Frank, Louisville.

DR. H. O. WALKER
President 1896

DR. A. R. ELLIOTT
President 1907

THE LATE DR. I. N. LOVE
President 1887, and for many years the ruling spirit of the Association

Second Vice-President, Albert E. Sterne, Indianapolis, Ind.

Secretary, Henry Enos Tuley, Louisville, Ky

Treasurer, Samuel Cecil Stanton, Chicago, Ill.

COMMITTEE OF ARRANGEMENTS.

Chairman, Louis H. Behrens;
Ways and Means, Henry Schwarz;
Entertainment, C. M. Nicholson;
Reception, John Young Brown;
Press, Thos. A. Hopkins;
Hotels, Frank Hinchey;
Ladies, Frances L. Bishop;
Registration, Henry J. Scherck;
Exhibits, Louis H. Behrens;
Clinics, Herman Tuholske;
Treasurer, J. H. Amerland;
Badges, Wm. E. Sauer.

M. V. M. A. NOTES.

The title of the paper to be read by Dr. L. H. Montgomery, of Chicago, has been changed from that announced in the preliminary program. His subject is "The Problem of a Federal Department of Health."

The Exhibit Hall for the meeting is unusually well located, and all the space allotted for it was taken a month ago. Were more space available it would be an easy matter to use it profitably. The 34 exhibitors are old and tried friends.

The effort to make the sessions of the association the principal business of the meeting has naturally influenced the local profession in their preparations, clinics and private dinners will be given but will be arranged for hours other than those regularly occupied by the association.

The meeting is to be opened by short addresses of welcome by Herbert S. Hadley, Governor of Missouri; Frederick Kreismann, Mayor of St. Louis; Dr. Tinsley Brown, President of the Missouri State Medical Association, and Dr. C. M. Nicholson, President of the St. Louis Medical Society.

The local committees at St. Louis are meeting with cordial co-operation from city officials and the Business Men's League in their preparations for the thirty-fifth annual meeting of this association. The Business Men's League has sent to physicians of our territory better than 5,000 invitations to the meeting, and the responses indicate an unusual attendance.

Badges and tickets to entertainments will be distributed to members at the time of regtration. Tickets and badges for ladies must be secured at the same time and place. The tickets are worded to be fully explanatory and are essential to admission to all the entertainments provided with the exception of the reception on Tuesday night, which is open to members and their friends.

It had been hoped that railroad rates showing exceptional concession on the part of the companies might be announced at this time, the meeting so closely following the centennial week of St. Louis an effort was made to have the rate of that occasion extended. But it seems impossible to get better than the rate usually offered, and that on the rather troublesome certificate plan. In buying tickets do not fail to secure a receipt which must be presented in St. Louis before the reduced rate for the return trip will be allowed.

Better than sixty reservations had been made at the Southern prior to September 22d, with no record of reservations at other hotels this indicates that the attendance is to be large. The Southern is a large hotel and one of the best in the country, in view of the fact that all the work of the association is to be done under its roof it is naturally the most convenient stopping place members could select. Within a radius of three blocks from the Southern are the Planters, American, Laclede and St. James, all excellent hotels; the Maryland and Jefferson are somewhat away from the place of meeting, but belong to the list of high class hotels.

The entertainment planned has been arranged to interfere in no way with the scientific work of the meeting, this having been suggested by the officers when in St. Louis early in the year. A general reception is to follow the orations on Tuesday evening, in the parlors of the Southern; an automobile ride through interesting parts of the city and a reception will be given the ladies on Wednesday afternoon, and in the evening of the same day a theater party at the Columbia has been arranged for all; on Thursday afternoon the city officials, through our health officers will entertain the association on a river excursion to an inspection of our main water plant some fifteen miles above the city. The plant is of itself very interesting, but being the birth-place of the coagulation process and the place showing that method of clarification in its highest development the opportunity to inspect it assumes double attractiveness.

Shallow catching, irregular breathing is characteristic of diaphragmatic inflammation—either peritoneal or pleural.—Amer. Jour. of Surg.

DR. C. A. L. REED
President 1892

NEW CITY HOSPITAL

HOW TO REACH POINTS OF MEDICAL INTEREST FROM THE SOUTHERN.

The Southern is on South Broadway (5th St.) and faces Broadway, Fourth and Walnut.

Medical Department of Washington University. Take Broadway or Fourth street car north, transfer to Olive street cars to 18th street, walk one block north.

W. U. Hospital and Clinic. Broadway or Fourth street cars to Washington Ave., transfer to Page cars and go to Jefferson, walk half a block north.

St. Louis University Medical Department. Walk block north from Southern to Market street, take Laclede car west, transfer to Grand car south and ride to Caroline.

Barnes University Medical Department. Laclede car west on Market to Garrison (30th St.), walk one block north.

St. Louis College of Physicians and Surgeons. Laclede car west on Market to Jefferson; transfer north on Jefferson car to Gamble street.

City Hospital. Laclede car west on Marke street, transfer south on Tower Grove car.

Insane Asylum, Female Hospital and Poor House Laclede car west on Market street, transfer south on Tower Grove car.

St. Luke's Hospital and the Jewish Hospital. Broadway car north to Olive street, transfer to Delmar car going west.

Mullanphy Hospital. Laclede car west to Grand Ave,, transfer to northbound Grand car to Montgomery street, walk one block east.

Baptist Sanitarium. Broadway car to Locust street, transfer to westbound Suburban car to Taylor Ave.

Deaconess Hospital. As above on westbound Suburban car to Sarah St., walk one block north.

Baptist Hospital. As above on westbound Suburban car to Garrison Ave.

St. John's Hospital. Broadway car north to Olive street, transfer to any westbound Olive street car to 22d street, one block north.

Alexian Brothers Hospital. Broadway car south to 3900.

Missouri Pacific Hospital. Fourth street car south to Eads Ave., walk one block north.

St. Anthony's Hospital. West on Laclede car, transfer south on Grand to Chippewa street.

Skin and Cancer Hospital. Broadway car to Olive, any Olive car west to Jefferson, walk two blocks north.

St. Louis Medical Society Auditorium, 3523 Pine street. Laclede car west to Theresa Ave.,walk two blocks north.

St. Louis Medical Library, 3525 Pine street. Same as above.

This is not a complete list.

A Boosting Club.

If there is any one thing which the medical profession needs more than another, it is the spirit of peace and good-will. Antagonisms are more noticeable in the smaller communities where the medical population is small and differences evident, but in proportion to the population there is just as much bickering and knocking in the cities. It is all wrong and all but the most hidebound of knockers recognize the fact. We are at all times opposed to knocking among physicians, and we believe in optimism. The following communication, when it first reached us, did not impress us a practical means to eliminate the knocker; we felt that such a move savored too much of the "sunshine" societies of children, but thought brings us to the conclusion that any means which purposes strengthening the fraternal tie among physicians should he encouraged. Dr. Wootton's letter reads as follows:

To the Editor:—Why not a "Booster Club" or a "Praise Your Brother Club" in the American Medical Association, with no dues or other requirements except that each member pledges himself never to speak unkindly or in criticism of a brother physician to the laity except that physician be also present. Let us renew our vows and wear buttons to show that we mean to keep them.

If such a condition could be brought about we would be held in much greater esteem by our patients and neighbors. Whenever a physician is condemned, maligned or criticized by another physician, the ill-will engendered in the minds of the laity is not against the one physician, but the class—individuals are forgotten and the profession is remembered as a whole. If I tell everyone that I meet that Dr. Pill is a rank physician; knows nothing of medicine and stoops to any mean practice, the laity soon forget that Dr. Pill is a "poor doctor" and retain the impression that we are all "poor doctors" ready to stoop to anything.

Let's stop it; raise the standard. Can we get together at St. Louis and organize a club?

Yours for "no knocking,"

W. T. WOOTTON, M. D., Hot Springs, Ark.

The above from the Journal A. M. A. of August 7th, 1909. Will you agitate such a scheme to the end that we may create a better general impression upon the laity, restore confidence in our profession and take away the foundation for so many pathies, religio-cures, etc.?

Very sincerely yours,

W. T. WOOTTON.

While the failure of physicians to stand together and our lack of a real fraternalism is notorious and exists everywhere, the work of overcoming it is colossal, it will have to begin with the individual and spread as a result of shining example. The danger of such a movement as Dr. Wootton now inaugurates is that it will be sidetracked and made to purpose something entirely different. It will be fatal to medical organization and medical progress if there is ever any discouragement on the part of the profession of a democratic supervision of those who have been placed in positions of authority, to make the least criticism of such a one a sort of lese majestie would be a tremendous misfortune so long as men are constituted as they are, conditions are as they are. The only

safeguard we have in our medical organization and its government lies in the freedom of speech; with officials so powerfully intrenched in their position, as they are in our organization, it would take a considerable freedom along this line and great effort and self-sacrifice to dislodge one when he is once established.

But between brother practitioners, especially in one community, amity should exist; it should be taught in our medical schools; it should be a constant theme of medical publications, and it might occupy the attention of medical organizations to the profit of the individual practitioner, the profession as a whole and the community.

Medical History in the Mississippi Valley.

THE St. Louis profession has reason for a considerable pride in its Medical History Club and the work which it has accomplished during the few years of its life. Aside from an accumulation of documents of historical value this organization has awakened in the profession a proper appreciation of the value that the day's data, properly preserved, may have in future years. It is a regretable fact that the profession had to learn this fact in the beginning of the 20th century; we have much preserved from the early days, but more is lost. Several years of the business transactions of the St. Louis Louis Medical Society are lost, simply because it was no one's business at the time to attend to preservation; the patriarchs have died and a later generation of patriarchs have been gathered to their last rest and no one has taken the trouble to get the invaluable record of the early days which any and all of them would gladly have given had anyone been sufficiently interested. A good listener who would ask the right question on occasion, a full glass, some cigars, and a stenographer, with such a combination any one of the "Old Guard" would have told us more of the lost medical history of St. Louis in an evening than now exists. But what is doing now is being properly recorded for the benefit of the present and future generations; we do not believe that the omissions of the past will ever in the future be repeated, for this we may thank the gentlemen who were instrumental in the organization of the Medical History Club.

In another column we are publishing a call from certain Cincinnati physicians, all men of National fame, who have organized the "Western Association for the Preservation of Medical Records." The purpose of this organization is somewhat different from that of our club, and in no way conflicts with it. We hope that our readers will interest themselves in this organization and assist as they can in its endeavors.

WITH a few exceptions the vacationists from St. Louis have returned and are again in the harness. None of those who attended the Congress at Budapest have yet returned, but report has it that all are en route homeward.

BATTLE & COMPANY have lately issued the tenth of their series of dislocation charts, which is of an anatomic excellence in keeping with those before it. Physicians who have not received the whole series or who wish to complete the series will be able to secure missing numbers by applying to Battle & Co., St. Louis.

DR. NORBURY TO BE SUPERINTENDENT OF KANKAKEE.—The appointment of Dr. Frank P. Norbury, some years editor of the Fortnightly and known to all Fortnightly readers, to the superintendency of the Kankakee (Illinois) Hospital for the Insane, is a news item which is of interest to all of us. This position is, we understand, one of the most important in the state open to medical men and the best paid. The expressions of satisfaction in both professional and lay journals in Illinois indicate that Dr. Norbury has gained a place in the esteem of the commonwealth which but few ever live to enjoy. Our own opinion is that the State and the institution are fortunate in having been able to secure the doctor's services. Dr. Norbury succeeds Dr. James L. Greene, who has been made the alienist member of the State board of control of the State's charitable institutions.

A Moist Dressing for Wounds.—A moist dressing for wounds, bruises, deep-seated inflammation, infected wounds and rheumatism, long used by Dr. W. J. McRoberts (Ellingwood's Therapeutist) and with very few failures, is the following:

Magnesium sulphate	ʒx
Phenol	ʒvj
Glycerin	ʒiss
Alcohol, 95 per cent	ʒiss
Water, q.s.ad	ʒlxxx

Dr. McRoberts says that this affords relief from pain in a very short time.

THE REVIEWER'S TABLE

Books, Reprints, and Instruments for this department, should be sent to the Managing Editor, Century Building, St. Louis

Organic and Functional Nervous Diseases. A Text-Book of Neurology. By M. Allen Starr, M. D., Ph. D., LL. D., Sc. D., Professor of Neurology, College of Physicians and Surgeons, New York, etc. Third edition, thoroughly revised. Octavo, 904 pages, with 300 engravings and 29 plates in colors or monochrome. Philadelphia and New York: Lea & Febiger, 1909. (Cloth, $6.00, net; leather, $7.00, net.)

Few departments of medicine have felt the need of practical text-books as has that devoted to nervous diseases, the available texts have been so wanting in condensation and have so frequently emphasized the author's interest in one or another particular phase of the subject to the disadvantage of a general view of the subject. This the third edition of Starr is an excellent text. In planning this new edition, the author has evidently studied with care the matter of adapting it still more closely to the requirements both of students and practitioners. He has spared himself no trouble, as the work is completely rearranged as well as thoroughly revised. The result is a very simple and natural presentation. In the first part he takes up methods of examination and diagnosis, with the necessary anatomy and physiology, and with this basis laid, he proceeds in the second part to cover the great division of organic diseases. In part third the functional diseases are fully presented, the space allotted having been more than doubled. Part four considers diseases of the sympathetic nervous system, closing the subject. The trend of the entire work is distinctly practical, embodying as it does the knowledge gained by twenty-seven years devoted to this specialty. It covers all aspects, both medical and surgical, and the possessor of the work may feel assured that he has at hand the latest and most authoritative information in shape for application. It is elaborately illustrated.

Diseases of the Genito-Urinary Organs and the Kidney. By Robert H. Greene, A. M., M. D., Professor of Genito-Urinary Surgery, Medical Department of Fordham University, etc., and Harlow Brooks, M. D., Assistant Professor of Clinical Medicine, Bellevue Hospital and Medical School, etc. Second edition, revised and enlarged. Pages 605, profusely illustrated. Philadelphia: W. B. Saunders Company, 1908.

We have yet to discover why authors of texts on diseases of the urinary and genital organs should feel it necessary to add to their title "and the Kidney," but custom has it so. This volume is one of the excellent works available on this subject. The authors have succeeded splendidly in their effort to make a volume which is scientifically accurate, complete and at the same time readable and understandable for the student and the general practitioner. The illustrations are splendid in their originality and in the assistance they give to an understanding of the text; we are glad to note the omission of several which have graced so many works for several decades past. The book is one which we can recommend to practitioners and students.

Manual of Therapeutics. Referring especially to the Products of the Pharmaceutical and Biological Laboratories of Parke, Davis & Co. Sent gratis on application. Detroit: Parke, Davis & Co., Publishers.

This is unquestionably one of the best therapeutic vade mecums which has ever come to our attention; it is well worth a considerable price and the fact of gratuitous distribution in nowise detracts from its value. The first 97 pages are devoted to those points of emergency information which every doctor needs to have at hand; tables of measure and weight, obstetric and other charts with explanatory text, poison, diet, eruptive fever and many other tables, and numerous other subjects of like importance are considered in a clear, concise and practical manner. The bulk of the book is devoted to materia medica, in this there is placed before the working practitioner, in the most convenient form, a means of perceiving at a glance every available form of medication. By referring to the chapter on Materia Medica, he can see quickly just what drugs, or preparations of a given drug, are available. And you will not have to examine the volume very long to satisfy yourself that a vast amount of hard work and painstaking thought has been mixed with the ink.

Progressive Medicine, Vol. III, September, 1909. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, 336 pages, with 37 engravings. Philadelphia and New York: Lea & Febiger, Publishers. (Per annum, in four cloth-bound volumes, $9.00; in paper binding, $6.00, carriage paid to any address.

The September volume of Progressive Medicine deals helpfully with four topics of great practical importance.

Under the title of Diseases of the Thorax and its Viscera, Professor Ewart gives an admirable summary of the recent advances in our knowledge of tuberculosis. Respiratory gases and aerotherapeutics; physical signs and examination of the chest; the pleura, common colds; asthma; the heart; and the bloodvessels, are topics with which

the author has dealt in a manner which will command spceial attention.

Dr. Gottheil's contribution, covering Dermatology and Syphilis, possesses much of interest, even for those whose practice lies outside the lines of these subjects. In particular, we would allude to the sections on the use of adrenalin in skin diseases; chancroid; comparative dermatology, exfoliating dermatitis; human glanders; the carbon dioxide treatment of lupus erythematosus; menstruation and dermatoses, and rhinoscleroma. The general resume devoted to syphilis is excellent.

The advance in our knowledge of obstetrics has been very completely covered by Dr. Davis. Among the topics in his contribution, which possess more than ordinary interest, may be mentioned pregnancy and its complications; labor; obstetric surgery; the puerperal period, and the newborn.

The department of Nervous Diseases concludes the volume. The author, Dr. William G. Spiller, has produced a very complete and lucid review of the advances in this rather abstruse department of medicine, as is especially apparent in his treatment of the subjects of diseases of brain; diseases of the spinal cord; diseases of the nerves; and miscellaneous nervous diseases.

Progressive Medicine occupies a field apart from that of the magazine. It performs for the general practitioner, the surgeon and the specialist a most important service, bringing him knowledge which he could not obtain, either by his own efforts or in any other publication.

Most of the advances in medicine are of course first announced in periodicals as the quickest means of publicity. Many of them are lost to the man who does not read a half-dozen languages, and this vital knowledge would moreover be limited to a very small circle were it not for the existence of this medium for universal diffusion.

Minor Operative Surgery, Including Bandaging. By Henry R. Wharton, M. D., Professor of Clinical Surgery in the Woman's Medical College, Philaeelphia. New (seventh) edition, enlarged and thoroughly revised. 12mo, 674 pages, with 555 illustrations. Philadelphia and New York: Lea & Febiger, 1909. (Cloth, $3.00, net.)

When a work reaches its seventh edition it has been tried and approved, and may fairly be considered established as a standard. Dr. Wharton's very compact and comprehensive manual covers a large and important field often inadequately treated in the voluminous works on general surgery. He describes and illustrates with abundant photographs all the bandages used today, showing clearly their successive turns, and then similarly treats all minor and major operations save those of a capital or gynecological nature. A useful chapter for the student and teacher as well as the practitioner deals with the operations that can be taught and practised on the body. This new edition has been revised thoroughly to the latest date both in its text and its profuse and telling illustrations.

CORRESPONDENCE

INTERNATIONAL MEDICAL CONGRESS.

Constantinople, September 7, 1909.

Editor Medical Fortnightly: You will, no doubt, be surprised to note our arrival at this point, as it was not contemplated in our "line of march," so to speak. The fact is that my wife and I are as much surprised as anyone can be; we thought nothing of coming here until, at one of the banquets given to the congressists at Budapest—the one to the urologs, by Professor Haberern—Dr. Raskai made such an impressive argument for the Constantinople Athens trip, and pictured the conditions so invitingly that we could not resist; and two days later we were enroute. A half day's stop at Bucarest, with a drive around the town, served as a good introduction to the Roumanian Medical Faculty and their magnificent equipment for medical instruction. On reaching this city by boat from Constanza (Roumania) a deputation of Turkish physicians and surgeons met us at the dock, welcomed us officially and gave out printed programs of their plans of entertainment, embracing drives to the museums, the imperial treasury and Sultan's palaces, the hospitals, medical college, and a "garden party." The schedule has been maintained to date. The perennial fraternalism of medical men thus appears in most enjoyable munificence, even in this far-off corner of the earth. The especial consideration shown by members of the government was given at the behest of the medical faculty.

But you no doubt want to hear something about the International Congress at Budapest. While I followed the work of the Urological Section pretty closely, and therefore was not posted on the general affairs of the meeting, I have heard on all sides that the meeting was a large success, the arrivals and registration being far in excess of the number expected by the secretaries. Nevertheless, the convention was well handled by the Budapesters, who have been working on the subject for several years, and whose successful experience might be valuable to our own profession in anticipa-

tion of the session in St. Louis of the American Medical Association. One thing they did was to engage and control a year ahead of the required time hotel and boarding accommodation for 7,000 guests, at the normal rate, charging a small fee ($1.70) per person to cover the expenses of conducting the work, etc. This prevented doubling up on hotel rates, and also placed them at the disposal of the congressists. There were about 5,000 registrations, of which 1,500 were from Budapest, leaving 3,500 non-residents to be cared for.

Budapest has about the same population as St. Louis, but is not supplied with as many large and modern hotels. Her taste runs more to large cafes and restaurants, lining the beautiful boulevards and the quais of the Danube. I was told that the government had appropriated $10,000 for the entertainment of the Congress. The many functions given were ample and delightful, not an evening passing without some form of entertainment for practically all present.

From St. Louis there were Drs. W. W. Graves. C. H. Hughes, Goldstein, Brown, Schlueter, Miller. Contributions to the scientific program were made a most altogether in German or French. Professor Casper, of Berlin, who was presiding over the urological section at the time, kindly translated into both of those languages what I said in the English, in presenting my cystocsope. I was rather surprised to note the very considerable interest shown in these American devices by the auditors, under the somewhat trying conditions.

At the urological dinner, given by Prof. Haberern, toasts were responded to in all of the following languages: Russan, Danish, Hungarian, Japanese, Spanish, Italian, Turkish, English, French and German—a veritable babel of tongues. I shall not be able to give you, with any degree of accuracy, the sentiments expressed. They seemed harmonious, however, in desiring to drink to the health of Budapest and her royal entertainers.

We expect to return in time for the Mississippi Valley Association meeting.

BRANSFORD LEWIS.

APPEAL TO THE MEDICAL PROFESSION OF THE WEST AND SOUTH.

Up to the present time there has been a concerted effort made to collect and preserve historical data in regard to the origin, evolution and personnel of our profession in this part of our country. The result of this delinqnency has been the total loss of much material that should have been preserved, especially pertaining to medical schools and societies, and biographical matter in connection with the practitioners and teachers of medicine of by-gone-days. A good deal of material of this character is still obtainable if a systematic effort is made to locate and preserve it. It is in the possession of individuals, families and private libraries and will eventually be lost. The Western Association for the Preservation of Medical Records was organized in May, 1909 for the purpose of collecting the historical and biographical records of the profession of the West and South. We wish to preserve anything and everything pertaining to Western medicine and medical men and are anxious to enlist the active help and support of every member of the profession who is in sympathy with our aims. We have made arrangements with the Lloyd Library, Cincinnati, O., for the proper housing of the material collected. The latter will be systematically arranged, catalogued and properly preserved so that it can be made available for research work. We sre particularly anxious to obtain

1. Medical journals published in the West and South prior to 1880;
2. Medical books and pamphlets written or published in the West;
3. Manuscripts and autographs of early physicians;
4. Old diplomas and other documents of a medical character;
5. Proceedings of medical societies;
6. Reports of hospitals and other medical institutions;
7. Catalogues and announcments of Western and Southern medical colleges of all "schools;"
8. Biographies and portraits of Western physicians;
9. Information and material of any kind pertaining to medicine and medical men and affairs in the West;
10. Curios of medico-historical character.

All contributions should be sent in care of the librarian. In view of the fact that we are performing a labor of love and have no funds, our friends and associates will readily understand why all contributions sent by express or freight should be prepaid, so that no expense may accrue to the association. The necessary expenses of the association are being met by voluntary contributions of its organizers.

May we not count upon your active help and support? We would like to hear from

every member of the profession who is interested in the proposed work.

C. A. L. Reed, M.D., Chairman,
Otto Juettner, M. D., Secretary.
A. G. Drury, M.D., Librarian,
710 W. Eighth St., Cincinnati, O.

AMERICAN PROCTOLOGIC SOCIETY.

Eleventh Annual Meeting, held in Atlantic City, June 7 and 8, 1909.

(Continued from page 395.)

Surgical Treatment of Diarrhea and a Description of a New Cecostomy Which permits Free Irrigation of Both the Large and Small Intestine.—(Samuel Goodwin Gant, M. D., LL. D., New York City, N. Y.)—In this article attention was first called to the frequency of occurrence of chronic diarrhea and the simplest and most reliable methods were briefly outlined of diagnosing ulcerative lesions of the colon inducing diarrhea and also the relative frequency was mentioned between gastric and hepatic diarrhea and those caused by local disease of the large intestines. The author then proceeded to make the following points: First. That acute attacks of diarrhea could sometimes be controlled by diet, rest and internal medication and, further, that the frequency of the evacuations could occasionly be diminished by these therapeutic measures in chronic diarrhea but that a cure of the latter could be accomplished only in rare instances in this way. Second. That the treatment of chronic ulcerative colitis by internal medication should be abandoned because it is harmful in many ways and utterly unreliable in so far as a cure of the diarrhea is concerned. Third. That direct bowel treatment by lavage or medicated irrigation introduced through the anus or above through the appendix or cecum, is the only rational treatment for diarrhea due to ulcerative lesions of the colon. Fourth. That operative procedures are contradicted except in case where, for any reason, the colon tube cannot be introduced sufficiently high, to insure thorough washing out of the entire large bowel and when operative procedeures are declined. Fifth. That the surgical treatment of chronic diarrhea gives universal satisfaction and that he recommended appendicostomy and cecostomy for the relief of this ailment with the same confidence that he did appendectomy for appendicitis. Sixth. The relative values of resection, intestinal exclusion colostomy, appendicostomy, simple cecostomy, and cecostomy with an arrangement for irrigating the small intestines. (Gant's operation), in the treatment of chronic diarrhoea, were fully discussed. The results of his experience show that appendicostomy and cecostomy could be performed most quickly, where the most dangerous, give the best results and were less often followed by unpleasant sequellae than the other procedures. Seventh. He stated that formerly he was prejudiced in favor of appendicostomy but that a more recent and larger experience had caused him to look with greater favor upon cecostomy especially when combined with irrigation of the small intestine. He mantained that his cecostomy was suitable in all cases of chronic diarrhea because it could be emsloyed when the frequent stools were due to both an enteritis and an ulcerative colitis and when the lesions were confined to the colon alone, and, further, that his operation should supercede appendicostomy, in many instances, because the appendix was frequently unfit for irrigating purposes because it was too short, too narrow, strictured or bound down by adhesions and often had a tendency to become necrotic, slip back into the abdomen, become closed when not kept open by the introduction of a catheter and that appendicostomy was not suitable when the small bowel was diseased. Eighth. He then briefly described the technic of his cecostomy with provision for small intestine irrigation, the main idea which consisted in making an opening in the cecum and inserting two tubes, one into the sectum and the other into the small intestine through the ileo-cecal valve by the aid of a catheter-carrier. He claimed that the advantage of this procedeure over other operations, was that either the small or large bowel could be irrigated at will and that there was no fecal leakage about the catheters. Ninth. In concluding his remarks, he summarized the results obtained by him in the surgical treatment of chronic diarrhea by the through and through method and reported 38 cases treated by appendicostomy, and 14 by cecostomy, 8 of the latter being operated uponby the Gibson, and the remainder by his new procedure and said that the universally successful results obtained by surgery in this class of cases is far better than those obtained by the use of the time-worn way, where they depend upon dieting, rest and medication, as practiced by many physicans today.

A Report of Two Cases of Anomalous Sigmoid—Arthur Hebb, M. D., of Baltimore, Md.)—One case was an extremely long sigmoid, reaching from the mammary line to a point midway of the thighs, when withdrawn from the abdomen; the second case was a short sigmoid, with a mesentery 3-4 inches in length, situated above the crest of the

ilium, on a line with the lower border of the last rib, coming off from the descending colon. It was only 4 inches in length. The decending loop, with no mesentry, ran down over the bifurcation of the left iliac artery and ureter; then forward, hugging the left side of the pelvis and down over the anterior and posterior branches of the internal iliac artery where it joined the rectum.

Nevus of the Anal Region with Report of a Case Associated with Internal Hemorrhoids—Lewis H. Adler, Jr., M.D., Philadelphia, Pa.)—The author of this paper mentioned the rarety of this condition as an anal affection. The patient whose condition wadetailed was a male, aged forty, whose habits were good. From birth he had a noticeble fullness at the anus, which as he grew older occasioned him considerable annoyance when walking and at stool. When twenty years old he had an operation for hemorrhoids performed which temporarily gave relief. As time went on his hemorrhoidal trouble returned and the external congenital fullness became worse. Bleeding frequently attended efforts to have an evacuation, though the bowels were never what you call costive. Examination prior to operation, revealed a mass of thickened skin, of a dull purplish hue, surrounding the anus about two inches in width and elevated from the surrounding skin about one sixteenth of an inch. Scattered over this area were numerous hairs. The anus was quite patulous, and, bearing down, a hemorrhoidal mass protruded and the external portion, around the anus, visibly increased. A diagnosis was made of nevus associated with internal hemorrhoids, and an operation was advised to which the patient readily consented. At this time he was apparently in fair physical condition and by no means markedly anemic, although his color was far from normal and he lacked what might be termed resistance. His weight at the time was 151 pounds and his usual weight being stated to have been 170 pounds. An operation was performed, on March 29th, five days after he was first seen by the writer. The patient took the anesthetic very badly; it requiring over a half hour to get him in condition to be placed upon the operating table. After the removal of the hemorrhoids, which were as large as any the writer had ever s e e n, — the tissue, composing them, being much thicker and denser than is usually encountered, in ordinary cases the patient's condition was that of profound collapse. The usual clamp and cautery method was used for tne removal of the five hemorrhoidal masses present. After the administration of a hypodermic injection of atropin and strychnine, the patient rallied, and the nevus was then excised. The removal of the latter caused very little loss of blood, so much so that its absence was remarked upon by several of those who witnessed the operation, and during its removal numerous veins were noticeable upon the under side of the growth, which stood out in their distended condition and showed a characteristic bluish color. By the time this stey was completed the patient's condition was bad again, the pulse weak, and the skin moist. The usual dressings were applied; no attempt being make to unite the edges of the wound and and the patient was removed to his room where a hypodermoclysis was promptly given to which was added four ounces of whiskey. His condition greatly improved but within five hours he was dead. The manner in which he diep led to the inference that his death was due to a cardiac embolism.

TO THE FRONT SAINT LOUIS

THE MEDICAL FORTNIGHTLY

A Cosmopolitan Biweekly for the General Practitioner

The Medical Fortnightly is devoted to the progress of the Practice and Science of Medicine and Surgery. Its aim is to present topics of interest and importance to physicians, and to this end, in addition to a well-selected corps of Department Editors, it has secured correspondents in the leading medical centers of Europe and America. Contributions of a scentific nature, and original in character, solicited. News of Societies, and of interesting medical topics, cordially invited.

Advertising forms close on the first and fifteenth of each month. Time should be allowed to submit proof for correction. Advertising rates on application.

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Contributors should understand that corrected typewritten copy is essential to clean proof and prompt publication, and is much more satisfactory than manuscript. Original articles should be as condensed as justice to the subject will allow.

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